The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (original) A method of controlling an asymmetric waveform generated as a combination of two sinusoidal waves having a frequency that differs by a factor of two, the method comprising the steps of:

sampling the generated asymmetric waveform to obtain a set of data points that is indicative of the generated asymmetric waveform;

arranging the sampled data points in an order according to magnitude;

comparing the arranged sampled data points to template data relating to a desired asymmetric waveform; and,

in dependence upon the comparison, determining a correction to the generated asymmetric waveform.

Claim 2 (original) A method according to claim 1, comprising a step of obtaining the template data, the template data including a set of data points relating to the desired asymmetric waveform.

Claim 3 (currently amended) A method according to claim 1 ~~any one of claims 1 and 2~~, wherein the step of sampling is performed as an analog-to-digital sampling for collecting data points contained within one cycle of the generated asymmetric waveform.

Claim 4 (currently amended) A method according to claim 1 ~~any one of claims 1 and 2~~, wherein the step of sampling is performed as an analog-to-digital sampling, for collecting data points from a plurality of portions of the generated asymmetric waveform during a period of time overlapping with a plurality of different cycles of the generated asymmetric waveform.

Claim 5 (currently amended) A method according to claim 2 ~~any one of claims 2, 3, and~~ 4, wherein the step of comparing comprises a step of determining a difference between each arranged sampled data point and a corresponding data point of the template data.

Claim 6 (currently amended) A method according to claim 1 ~~any one of claims 1, 2, 3, 4, and 5~~, wherein the generated asymmetric waveform has the general form $V(t) = A \sin(\omega t) + B \sin(2\omega t - \Theta)$, where V(t) is the asymmetric waveform voltage as a function of time, A is the amplitude of the first sine wave at frequency ω, where ω is the frequency in radians/sec, B is the amplitude of the second sine wave at a frequency 2ω, and Θ is a phase angle offset between the first sinusoidal wave and the second sinusoidal wave.

Claim 7 (currently amended) A method according to claim 6, wherein the determined correction is for satisfying the condition A+B is equal to a desired asymmetric waveform peak voltage.

Claim 8 (original) A method according to claim 6, wherein the determined correction is for satisfying the condition $\Theta = \pi/2$.

Claim 9 (original) A method according to claim 6, wherein the determined correction is for satisfying the condition that A/B equals a predetermined value.

Claim 10 (currently amended) A method according to claim 1 ~~any one of claims 1 to 9~~, including the step of repeating the steps of claim 1 in an iterative fashion.

Claim 11 (original) A method according to claim 1, wherein the determined correction is for adjusting at least one of a phase angle difference between the two sinusoidal waves and an amplitude of at least one of the two sinusoidal waves.

Claim 12 (currently amended) A method according to claim 2 ~~any one of claims 2 through 10~~, wherein the step of obtaining template data comprises the step of retrieving template data from a memory.

Claim 13 (currently amended) A method according to claim 2 ~~any one of claims 2 through 10~~, wherein the step of obtaining template data comprises the step of evaluating $V(t) = A \sin(\omega t) + B \sin(2\omega t - \Theta)$ for each one of a plurality of t-values, for determining a first set of data points, and further comprises the step of arranging the first set of data points in an order according to magnitude.

Claim 14 (currently amended) A method according to claim 2, wherein the set of data points that is indicative of the generated asymmetric waveform and the template data relating to the desired asymmetric waveform include a same number of data points.

Claim 15 (original) A storage medium encoded with machine-readable computer program code for controlling an asymmetric waveform generated as a combination of two sinusoidal waves having a frequency that differs by a factor of two, the storage medium including instructions for:

obtaining a set of data points that is indicative of the generated asymmetric waveform;

arranging the data points in an order according to magnitude;

obtaining template data including a set of data points relating to a desired asymmetric waveform;

comparing values of data points within a predetermined range of the arranged data points to values of data points within a corresponding predetermined range of the template data; and,

in dependence upon the comparison, adjusting at least one of a phase angle difference between the two sinusoidal waves and an amplitude of at least one of the two sinusoidal waves.

Claim 16 (new) A method according to claim 7, wherein the determined correction is for satisfying the condition $\Theta = \pi/2$.

Claim 17 (new) A method according to claim 7, wherein the determined correction is for satisfying the condition that A/B equals a predetermined value.

Claim 18 (new) A method according to claim 16, wherein the determined correction is for satisfying the condition that A/B equals a predetermined value.

Claim 19 (new) A method according to claim 6, including the step of repeating the steps of claim 1 in an iterative fashion.

Claim 20 (new) A method according to claim 6, wherein the determined correction is for adjusting at least one of a phase angle difference between the two sinusoidal waves and an amplitude of at least one of the two sinusoidal waves.